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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,683	11/06/2005	Yves Desarzens	PRE-SA 0126	5316
33751	7590	03/09/2009		
Greatbatch Ltd. 10,000 Wehrle Drive Clarence, NY 14031			EXAMINER GEORGE, TARA R	
			ART UNIT 3733	PAPER NUMBER
			NOTIFICATION DATE 03/09/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mscalise@greatbatch.com  
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### Office Action Summary

**Application No.**

10/526,683

**Applicant(s)**

DESARZENS ET AL.

**Examiner**

TARA R. GEORGE

**Art Unit**

3733

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-5,7,8,10,11 and 13-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,8,10,11 and 13-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/29/2008
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5, 7, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (2005/0203525) in view of Weigand et al. (4023572).

With respect to claim 1, White teaches an acetabular reamer for surgical use (eg. fig. 16) comprising a hemispherical, hollow dome (15) extending from an apex (para. 69 line 5) to a lower edge (58) defining a plane at a theoretical equator of the hemispherical dome (note last 5 lines of abstract); and an interface structure (at 56 and 62) comprising at least one cross-bar fixedly attached to the inside of the dome at intermediate locations between the theoretical equatorial plane of the hemispherical dome and the apex so that the interface structure comprising the at least one cross-bar is positioned inwardly from the lower edge defining the theoretical equatorial plane and within the dome.

White teaches the claimed invention but does not appear to explicitly state wherein the interface structure is entirely fixedly attached to the inside of the dome. Weigand teaches an interface structure (110) entirely fixedly attached to the inside of a dome. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the attachment location of White in view of Weigand in order to

provide better support and more finite control of the reamer head, especially near the apex, during use, while protecting the connection of the interface structure and driving handle or shaft.

As for claims 3-5, White further teaches wherein the dome has at least one section of the dome removed; wherein a plurality of sections of the dome are removed, wherein said removed sections are equally spaced about the equator of the dome; and wherein the removed section renders the dome asymmetrical (figs. 6, 7).

As for claim 7, White further teaches wherein the cross-bar is fixedly attached to the inside of the dome along a latitudinal plane (fig. 16).

As for claim 8, it is noted that White teaches the removal of part of the dome in order to create a less invasive static insertion profile area (last sentence of para. 6). It would have been obvious to one of ordinary skill in the art at the time of the invention that the removal of one section will reduce the static insertion profile area and thus render the dome asymmetrical.

As for claim 11, White further teaches a cross bar interface structure with a central centering boss (para. 14).

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (2005/0203525) and Weigand et al. (4023572), as applied to claim 1, in further view of Lechot (5658290).

As for claim 10, White further teaches wherein the interface structure comprises at least two cross-bars in the form of a cross with the bars spaced 90 degrees from

each other at locations between the theoretical equatorial plane and the apex (fig. 16). The combination of White and Weigand do not teach said bars having their respective ends fixedly attached to the inside of the dome. Lechot teaches two cross-bars (2) in the form of a cross spaced 90 degrees from each other, both bars fixedly attached to the inside of the dome (fig. 2). It would have been obvious to one of ordinary skill in the art at the time of the invention that the configuration of two cross-bars in the form of a cross spaced 90 degrees from each other, both bars fixedly attached to the inside of a dome is known and the substitution of the cross bar configuration of White and Weigand in view of Lechot would obtain predictable results.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (2005/0203525) and Weigand et al. (4023572), as applied above, in further view of Nordin (US 3847154).

With respect to claim 13, White and Weigand further teach a reamer spindle having a coupling, wherein the reamer and the spindle are detachably attachable to each other via the inset interface structure and the coupling (White para. 14 and Weigand figs. 7-9). White and Weigand teach the claimed invention except for the reamer spindle being angled. Nordin teaches an angled drive shaft (see fig. 2) in order to more easily center the drive shaft with respect to the surgical site (see col. 1 lines 14-17). It would have been obvious to one of ordinary skill in the art at the time of invention to modify White and Weigand in view of Nordin in order to more easily center the drive shaft with respect to the surgical site.

Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross (3412733) in view of Lechot (6106536) in further view of Weigand (4023572).

With respect to claim 14, Ross teaches a hollow dome (at 5) extending from an apex (at 10) to a lower edge (9); and an interference structure comprising a shaft (6) secured to an inner surface of the dome at the apex and extending to a distal end (at 9).

Ross does not teach a hemispherical shape defining a theoretical equator; or the distal end of the shaft supporting at least two radial spokes extending therefrom in a radial spokes plane within the dome at an intermediate location between the theoretical equatorial plane of the dome and apex, wherein each radial spoke has a proximal end attached to the shaft and a distal spoke end spaced from an inner surface of the dome.

Lechot teaches a reamer that is a hemispherical shape defining a theoretical equator (col. 1 lines 41-42); and a shaft (3) with at least two radial spokes (4) in a radial spokes plane, wherein each radial spoke has a proximal end attached to the shaft and a distal spoke end spaced from an inner surface of the dome (fig. 1) in order to attach a reamer spindle to the reamer (col. 2 lines 24-33). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the structure of the shaft of Ross in view of the shaft of Lechot in order to construct a reamer spindle attachment that determines the axis of rotation of the reamer while providing stability via more attachment points.

Ross and Lechot teach the claimed invention but do not appear to specifically teach a radial spokes plane within the dome at an intermediate location between the

theoretical equatorial plane of the dome and apex. Weigand teaches an interface structure (110) plane within the dome at an intermediate location between the theoretical equatorial plane of the dome and apex. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the attachment location of Ross and Lechot in view of Weigand in order to provide more finite control of the reamer head, especially near the apex, during use, while protecting the connection of the interface structure and reamer spindle.

As for claim 15, Lechot further teaches four radial spokes (col. 2 lines 24-30).

As for claim 16, Lechot further teaches wherein the four radial spokes are disposed at 90 degrees with respect to each other (col. 2 lines 24-30).

As for claim 17, Weigand teaches an interface structure plane parallel to the equatorial plane so that the interface structure is completely within the dome (fig. 1).

Claims 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross (3412733), Lechot (6106536) and Weigand (4023572), as applied to claim 14, further in view of White et al. (2005/0203525).

As for claims 18-21, Ross, Lechot and Weigand do not teach the removal of a section or sections of the dome. White teaches the removal of area from a dome wherein the dome has at least one section of the dome removed; wherein a plurality of sections of the dome are removed, wherein said removed sections are equally spaced about the equator of the dome; and wherein the removed section renders the dome asymmetrical (figs. 6, 7- note that the removal of one section will reduce the static

insertion profile area and thus render the dome asymmetrical), in order to create a less invasive static insertion profile area (last sentence of para. 6). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the dome of Ross, Lechot and Weigand in view of White in order to create a less invasive static insertion profile.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross (3412733), Lechot (6106536) and Weigand (4023572), as applied above, in further view of Nordin (US 3847154).

With respect to claim 12, Ross, Lechot and Weigand further teach a reamer spindle having a coupling, wherein the reamer and the spindle are detachably attachable to each other via the inset interface structure and the coupling (Ross fig. 1; Lechot col. 2 lines 24-30 and Weigand figs. 7-9). Ross, Lechot and Weigand teach the claimed invention except for the reamer spindle being angled. Nordin teaches an angled drive shaft (see fig. 2) in order to more easily center the drive shaft with respect to the surgical site (see col. 1 lines 14-17). It would have been obvious to one of ordinary skill in the art at the time of invention to modify Ross, Lechot and Weigand in view of Nordin in order to more easily center the drive shaft with respect to the surgical site.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 3, 4, 5, 7, 8, 10, 11 and 13-22 have been considered but are moot in view of the new ground(s) of rejection.

With respect to the term "hemispherical" and the phrase "equatorial plane": a hemisphere is defined as "a half of a sphere bounded by a great circle"; "a half of a symmetrical, approximately spherical object as divided by a plane of symmetry"; "either half of the celestial sphere as divided by the ecliptic, the celestial equator, or the horizon", according to [www.dictionary.com](http://www.dictionary.com). Therefore, a hemisphere is by definition bounded by an equatorial plane. MPEP section 2125 states: "[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue."). However, the description of the article pictured can be relied on, in combination with the drawings, for what they would reasonably teach one of ordinary skill in the art. In re Wright, 569 F.2d 1124, 193 USPQ 332 (CCPA 1977).

As for claims 14-22 it is noted that Ross teaches a reamer spindle attachment shaft located at an apex of a dome. Lechot is relied upon for teaching a reamer spindle connector (ie. a shaft with spokes attached thereto). It is noted that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. **See PTO-892: note that US 5658290 specifically teaches the attachment of a reamer spindle attachment (2) inside of a hollow hemispherical dome.**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TARA R. GEORGE whose telephone number is (571)272-3402. The examiner can normally be reached on M-F from 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached on (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. R. G./  
Examiner, Art Unit 3733  
/Eduardo C. Robert/  
Supervisory Patent Examiner, Art Unit 3733

